

## January 11th (Tuesday)

PRESENTATION		NAME
No.	time	
<b>OPENING REMARKS</b> (9:50 ~ 10:10)		
Tu-01	10:10	Charles Marcus <Plenary>
<b>COFFEE BREAK</b> (10:50 ~ 11:20)		
Tu-02	11:20	Herre van der Zant <Invited>
Tu-03	11:50	Hajime Okamoto
Tu-04	12:10	K.-J. Friedland
<b>LUNCH TIME</b> (12:30 ~ 13:50)		
Tu-05	13:50	Christian Glattli <Invited>
Tu-06	14:20	Hans Schumacher <Invited>
Tu-07	14:50	Gento Yamahata
Tu-08	15:10	Vladimir Antonov
<b>COFFEE BREAK</b> (15:30 ~ 16:00)		
Tu-09	16:00	Yasunobu Nakamura <Invited>
Tu-10	16:30	John Clarke <Invited>
Tu-11	17:00	Alexandre Blais <Invited>
<b>Poster Session I</b> (17:30 ~ 19:10)		
<b>WELCOME RECEPTION</b> (19:10 ~ 20:00)		

## January 12th (Wednesday)

PRESENTATION		NAME
No.	time	
We-01	9:00	Philip Kim <Invited>
We-02	9:30	Satoshi Moriyama <Invited>
We-03	10:00	Alexander Tzalenchuk <Invited>
<b>COFFEE BREAK</b> (10:30 ~ 11:00)		
We-04	11:00	Michelle Y. Simmons <Invited>
We-05	11:30	Michiharu Tabe <Invited>
We-06	12:00	Jianshu Yang
<b>SYMPOSIUM PHOTO (12:20~12:30)</b>		
<b>LUNCH TIME</b> (12:30 ~ 13:50)		
We-07	13:50	Kensuke Kobayashi
We-08	14:10	Shintaro Takada
We-09	14:30	David Rees
We-10	14:50	Gerardo Gamez
We-11	15:10	Lars Tiemann
<b>COFFEE BREAK</b> (15:30 ~ 16:00)		
We-12	16:00	Alexander Golubov <Invited>
We-13	16:30	Ikuo Suemune <Invited>
We-14	17:00	Xiaobo Zhu
We-15	17:20	Tetsuya Mukai
<b>Poster Session II</b> (17:40 ~ 19:20)		

## January 13th (Thursday)

PRESENTATION		NAME
No.	time	
Th-01	9:00	Oskar Painter <Invited>
Th-02	9:30	John Teufel <Invited>
Th-03	10:00	Imran Mahboob
<b>COFFEE BREAK</b> (10:20 ~ 10:50)		
Th-04	10:50	Denis Vion <Invited>
Th-05	11:20	Matteo Mariantoni <Invited>
Th-06	11:50	Alexandre Kemp
Th-07	12:10	Tsuyoshi Yamamoto
<b>LUNCH TIME</b> (12:30 ~ 13:50)		
Th-08	13:50	Amir Yacoby <Invited>
Th-09	14:20	Sergey Frolov <Invited>
Th-10	14:50	Takeshi Ota
Th-11	15:10	Shinichi Amaha
Th-12	15:30	Takashi Kobayashi
<b>Bus Transfer (16:00~16:30)</b>		
<b>Sake Brewery Tour</b> (16:30~17:30)		
<b>BANQUET</b> (17:30 ~ 20:00)		

## January 14th (Friday)

PRESENTATION		NAME
No.	time	
Fr-01	9:00	Wolfgang Wernsdorfer <Invited>
Fr-02	9:30	Masamichi Saitoh
Fr-03	9:50	Makoto Kohda
Fr-04	10:10	Takaaki Koga
Fr-05	10:30	Shingo Katsumoto
<b>COFFEE BREAK</b> (10:50 ~ 11:20)		
Fr-06	11:20	Frederic Pierre <Invited>
Fr-07	11:50	Kensaku Chida
Fr-08	12:10	Norio Kumada
<b>LUNCH TIME</b> (12:30 ~ 13:50)		
Fr-09	13:50	Pawel Hawrylak <Invited>
Fr-10	14:20	Shintaro Nomura
Fr-11	14:40	Junichiro Hayakawa
Fr-12	15:00	Alex Hayat
Fr-13	15:20	Gerhard Abstreiter <Special>
<b>CLOSING</b> (16:00 ~ 16:20)		

# January 11th, Tuesday

09:50~10:10

OPENING REMARKS

## SESSION 1: Plenary session

10:10~10:50

**Tu-01 : Electron and Nuclear Spin Manipulation in Quantum Dot Systems**

<PLENARY> Charles Marcus  
*Harvard University*

10:50~11:20

COFFEE BREAK

## SESSION 2: Nanomechanics-1

11:20~11:50

**Tu-02 : Carbon Nanotube Mechanical Resonators**

<INVITED> Herre van der Zant  
*TU Delft*

11:50~12:10

**Tu-03 : Nonlinear Nanomechanical Resonance of Coupled GaAs Oscillators**

H. Okamoto, C. Y. Chang, K. Onomitsu, E. Y. Chang, H. Yamaguchi  
*NTT Basic Research Laboratories, National Chiao-Tung University*

12:10~12:30

**Tu-04 : High-mobility Electrons on a Cylindrical Surface  
Quantum Transport and Coupling with Vibration Modes due to  
Induced Magnetic Moments**

K.-J. Friedland, H. Okamoto, H. Yamaguchi, R. Hey, A. Riedel  
*Paul-Drude-Institut, NTT Basic Research Laboratories*

12:30~13:50

LUNCH

## SESSION 3: Single electron systems

13:50~14:20

**Tu-05 : Quantum Noise of Single Electrons Injected in a Ballistic Conductor**

<INVITED> Christian Glattli  
*ENS and CEA Saclay*

14:20~14:50

**Tu-06 : Non-adiabatic Quantized Charge Pumping in GaAs Quantum Dots**

<INVITED> Hans Schumacher  
*PTB*

14:50~15:10

**Tu-07 : Shuttling Transfer of Single Electrons in Si Nanowire MOSFETs**

Gento Yamahata, Katsuhiko Nishiguchi, Akira Fujiwara  
*NTT Basic Research Laboratories*

15:10~15:30

**Tu-08 : Sensitive Terahertz Imaging Using Quantum Dot Sensor**

S Pelling, E Otto, S Spasov, S Kubatkin, A. Tzalenchuk, R Shaikhaidarov,  
S Komiyama, V.N. Antonov  
*Royal Holloway University of London, Chalmers University of Technology  
National Physical Laboratory, University of Tokyo*

15:30~16:00

COFFEE BREAK

**SESSION 4: Superconducting qubits-1**

16:00~16:30

**Tu-09 : Superconducting Qubit as an Artificial Atom**

<INVITED> Yasunobu Nakamura  
*NEC*

16:30~17:00

**Tu-10 : Mechanism for  $1/f$  Magnetic Flux Noise in SQUIDs and Flux Qubits**

<INVITED> John Clarke  
*UC Berkeley*

17:00~17:30

**Tu-11 : Correlation Measurements of Microwave Photons Using Linear Detectors**

<INVITED> Alexandre Blais  
*University of Sherbrooke*

17:30~19:10

Poster Session I

19:10~20:00

WELCOME RECEPTION (NTT R&D Center)

# January 12th, Wednesday

## SESSION 1: Graphene

09:00~09:30

**We-01 : Electron Transport in Graphene Nanostructures**

<INVITED> Philip Kim  
*Columbia University*

09:30~10:00

**We-02 : Quantum Dots and Nanostructures in Graphene**

<INVITED> Satoshi Moriyama  
*NIMS*

10:00~10:30

**We-03 : Robust Quantum Resistance Standard Based on Epitaxial Graphene**

<INVITED> Alexander Tzalenchuk  
*National Physical Laboratory*

10:30~11:00

COFFEE BREAK

## SESSION 2: Single atom devices

11:00~11:30

**We-04 : Donor Based Quantum Dots and Single Donors in Silicon**

<INVITED> Michelle Y. Simmons  
*University of New South Wales*

11:30~12:00

**We-05 : Si Single Dopant Devices**

<INVITED> Michiharu Tabé  
*Shizuoka University*

12:00~12:20

**We-06 : Manipulation of Single Adatoms and Vacancies on a III-V Semiconductor Surface**

J. Yang, Ch. Nacci, K. Kanisawa, T. Akiyama, S. Fölsch  
*Paul Drude Institute, NTT Basic Research Laboratories, Mie University*

12:20~12:30

SYMPOSIUM PHOTO

12:30~13:50

LUNCH

## SESSION 3: Coherent transport and quantum Hall effect

13:50~14:10

**We-07 : Nonequilibrium Fluctuation Relations in a Quantum Coherent Conductor**

Shuji Nakamura, Yoshiaki Yamauchi, Masayuki Hashisaka, Kensaku Chida,  
Kensuke Kobayashi, Teruo Ono, Renaud Leturcq, Klaus Ensslin, Keiji Saito,  
Yasuhiro Utsumi, Arthur C. Gossard  
*Kyoto University, CNRS-UMR, ETH Zürich, University of Tokyo, Mie University, UC Santa Barbara*

14:10~14:30

**We-08 : Non-adiabatic Interferometer of an Aharonov-Bohm Ring with a Tunnel-coupled Wire**

S. Takada, M. Yamamoto, C. Bäuerle, A.D. Wieck, S. Tarucha  
*University of Tokyo, Institut Néel CNRS and Université Joseph Fourier, Ruhr-Universität Bochum*

14:30~14:50

**We-09 : Point Contact Transport Properties of a Strongly Correlated Electron System on Liquid Helium**

D. G. Rees, I. Kuroda, C. A. Marrache-Kikuchi, M. Hofer, P. Leiderer, K. Konc  
*RIKEN, Tokyo Institute of Technology, Konstanz University*

14:50~15:10

**We-10 : Different Roles of Disorder on the  $\nu = 5/2$  Fractional Quantum Hall State**

G. Gamez, K. Muraki  
*NTT Basic Research Laboratories*

15:10~15:30

**We-11 : Probing the Spin Polarization of the  $\nu = 5/2$  Fractional Quantum Hall State**

L. Tiemann, G. Gamez, N. Kumada, K. Muraki  
*NTT Basic Research Laboratories, ERATO-JST*

15:30~16:00

COFFEE BREAK

*SESSION 4: Mesoscopic superconductor*

16:00~16:30

**We-12 : Odd-frequency Pairing in Superconducting Heterostructures**

<INVITED> Alexander Golubov  
*University of Twente*

16:30~17:00

**We-13 : Cooper-Pair Light Emitting Diodes**

<INVITED> Ikuo Suemune  
*Hokkaido University*

17:00~17:20

**We-14 : Coherent Operation of a Gap-tunable Flux Qubit**

Xiaoabo Zhu, Alexander Kemp, Shiro Saito, Kouichi Semba  
*NTT Basic Research Laboratories*

17:20~17:40

**We-15 : Productive Role of Magnetic Fluxes on Superconducting Atom Chips**

Tetsuya Mukai  
*NTT Basic Research Laboratories*

17:40~19:20

Poster Session II

# January 13th, Thursday

## SESSION 1: Nanomechanics-2

09:00~09:30

**Th-01 : Radiation Pressure at the Nanoscale: Classical- and Quantum-Optical**

<INVITED> **Applications**

Oskar Painter

*Caltech*

09:30~10:00

**Th-02 : Circuit Cavity Electromechanics in the Strong Coupling Regime**

<INVITED> John Teufel

*NIST*

10:00~10:20

**Th-03 : A Universal Electromechanical Logic Gate**

Imran Mahboob, Emmanuel Flurin, Katsuhiko Nishiguchi, Akira Fujiwara,

Hiroshi Yamaguchi

*NTT Basic Research Laboratories*

10:20~10:50

COFFEE BREAK

## SESSION 2: Superconducting qubits-2

10:50~11:20

**Th-04 : Strong Coupling of a Spin Ensemble to a Superconducting Resonator**

<INVITED> Denis Vion

*CEA Saclay*

11:20~11:50

**Th-05 : Exploring a Multi-Resonator Circuit Quantum Electrodynamics Architecture**

<INVITED> Matteo Mariantoni

*UC Santa Barbara*

11:50~12:10

**Th-06 : A Persistent Current Qubit on the Edge Between Microscopic Excitations and Macroscopic Photons**

Alexander Kemp, Shiro Saito, William J. Munro, Kae Nemoto, Kouichi Semba

*NTT Basic Research Laboratories, National Institute of Informatics*

12:10~12:30

**Th-07 : Quantum Process Tomography of Two-qubit Controlled-Z and Controlled-NOT Gates Using Superconducting Phase Qubits**

T. Yamamoto, M. Neeley, E. Lucero, R. C. Bialczak, J. Kelly, M. Lenander,

M. Mariantoni, A. D. O'Connell, D. Sank, H. Wang, M. Weides, J. Wenner, Y. Yin,

A. N. Cleland, John M. Martinis

*NEC Corporation, UC Santa Barbara*

12:30~13:50

LUNCH

**SESSION 3: Semiconductor quantum dots and qubits**

13:50~14:20

**Th-08 : Control and Manipulation of Two-Electron Spin Qubits in GaAs Quantum Dots**  
<INVITED> Amir Yacoby  
*Harvard University*

14:20~14:50

**Th-09 : Spin-Orbit Qubit in a Semiconductor Nanowire**  
<INVITED> Sergey Frolov  
*TU Delft*

14:50~15:10

**Th-10 : Coherent Manipulation of a Charge in a One-electron Double Quantum Dot**  
Takeshi Ota, Kenichi Hitachi, Koji Muraki  
*NTT Basic Research Laboratories*

15:10~15:30

**Th-11 : Quartet Spin Blockade Mechanisms in Vertical Double Quantum Dots**  
S. Amaha, W. Izumida, Y. Tokura, T. Hatano, R. Takahashi, K. Kono, J. A. Gupta,  
D. G. Austing, S. Tarucha, K. Ono  
*RIKEN, Tohoku University, NTT Basic Research Laboratories, ERATO-JST,  
National Research Council of Canada, University of Tokyo*

15:30~15:50

**Th-12 : Electronic Transport Accompanied by Dynamic Nuclear Spin Polarization in a GaAs Lateral Double Quantum Dot**  
Takashi Kobayashi, Kenichi Hitachi, Satoshi Sasaki, Koji Muraki  
*NTT Basic Research Laboratories, Tohoku University*



Bus Transfer (16:00~16:30)



16:30~17:30

Sake Brewery Tour

17:30~20:00

BANQUET (RISTORANTE SELVAGGINA)

# January 14th, Friday

## SESSION 1: Nano SQUID and spintronics

09:00~09:30

**Fr-01 : Quantum Spintronics Using Molecular Nanomagnets**

<INVITED> Wolfgang Wernsdorfer  
*Institut Néel, CNRS*

09:30~09:50

**Fr-02 : Development of Tunnel Junction Micro-SQUID for Investigation of Single-Molecule Magnets**

M. Saitoh, H. Ebina, H. Oshio, Y. Ootuka  
*University of Tsukuba*

09:50~10:10

**Fr-03 : Spin Polarization in InGaAs Quantum Point Contacts at Zero Magnetic Field**

Makoto Kohda, Junsaku Nitta  
*Tohoku university, PRESTO-JST*

10:10~10:30

**Fr-04 : Determination of Spin-Orbit Coefficients in  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}/\text{In}_{0.52}\text{Al}_{0.48}\text{As}$  Quantum Wells**

S. Faniel, T. Matsuura, S. Mineshige, Y. Sekine, T. Koga  
*Hokkaido University, NTT Basic Research Laboratories*

10:30~10:50

**Fr-05 : Magnetization Dependent Rectification in (Ga,Mn)As Triple-layer Tunneling Junctions**

Y. Hashimoto, H. Amano, Y. Iye, S. Katsumoto  
*University of Tokyo*

10:50~11:20

COFFEE BREAK

## SESSION 2: Edge channel

11:20~11:50

**Fr-06 : Exploring and Tuning the Dynamics of Quantum Hall Edge States**

<INVITED> Frederic Pierre  
*CNRS*

11:50~12:10

**Fr-07 : Electron Depolarization in a Non-equilibrium Quantum Wire in the Quantum Hall Regime Proved by the Noise and Resistive-detection NMR Measurement**

K. Chida, M. Hashisaka, Y. Yamauchi, S. Nakamura, T. Arakawa, T. Machida, K. Kobayashi, T. Ono  
*Kyoto University, University of Tokyo*

12:10~12:30

**Fr-08 : Edge Magnetoplasmon Transport in Gated and Ungated Quantum Hall Systems**

N. Kumada, H. Kamata, K. Muraki, T. Fujisawa  
*NTT Basic Research Laboratories, Tokyo Institute of Technology*

12:30~13:50

LUNCH

**SESSION 3: Optical properties**

13:50~14:20

**Fr-09 : Optical Properties of 2D and 0D Correlated Electron Systems**

<INVITED> Pawel Hawrylak  
*NRC*

14:20~14:40

**Fr-10 : Composite Fermion Picture for Photoluminescence in the Fractional Quantum Hall Effect Regime**

S. Nomura, M. Yamaguchi, H. Tamura, T. Akazaki, Y. Hirayama, P. Hawrylak  
*University of Tsukuba, NTT Basic Research Laboratories, Tohoku University, ERATO-JST, NRC*

14:40~15:00

**Fr-11 : Optical Studies of the Spin Phase Transition in the  $\nu = 2/3$  Fractional Quantum Hall Regime**

J. Hayakawa, K. Muraki, G. Yusa  
*Tohoku University, NTT Basic Research Laboratories*

15:00~15:20

**Fr-12 : Energy Qubit Quantum Information Processing by Semiconductor Two-photon Processes**

A. Hayat, P. Ginzburg, A. Nevet, M. Orenstein  
*Technion*

15:20~16:00

**Fr-13 : Spin Control in Self-Assembled InGaAs Quantum Dots**

<SPECIAL> Gerhard Abstreiter  
*TU München*

16:00~16:20

**CLOSING**

## Poster Session I ( Jan. 11, Tuesday )

17:30~19:10

- PTu-01 : Excited-State Energy Levels of Four-Josephson-Junction Circuit in Crossover from Double-Well to Single-Well Potential**  
Y. Shimazu  
*Yokohama National University*
- PTu-02 : Proximity Effect in Ferromagnet/Superconductor Junctions**  
D. Yoshizaki, Y. Tanaka, A. Golubov  
*Nagoya University, Twente University*
- PTu-03 : Theoretical Study of Applying Non-contact Andreev Reflection to the Spin-polarization Measurement**  
H. Ohtori, H. Imamura  
*University of Tsukuba, NRI-AIST*
- PTu-04 : Josephson Current and Andreev Reflection Through a Kondo Y-junction**  
Akira Oguri, Yoichi Tanaka  
*Osaka City University, RIKEN*
- PTu-05 : Observation of the Lithographically Induced Uniaxial Anisotropy on Ultra Thin (Ga,Mn)As Narrow Wires**  
J. Shioagai, D. Schuh, W. Wegscheider, M. Kohda, J. Nitta, D. Weiss  
*University of Regensburg, Tohoku University, ETH Zürich*
- PTu-06 : The Effects of Unsymmetrical AC Electrodeposition and Frequency on Microstructure and Magnetic Properties of FE Nanowires**  
M. Zangouri, F. AdelniaNajafabadi, A. Ramazani, M. Almasi Kashi  
*University of Kashan*
- PTu-07 : Current Induced Magnetization Dynamics of a One-dimensional Domain Wall with a Free Layer**  
H. Arai, T. Taniguchi, H. Imamura  
*NRI, AIST, University of Tsukuba*
- PTu-08 : Distinguishing Quantum and Classical Transport through Nanostructures**  
Neill Lambert, Clive Emary, Yueh-nan Chen, Franco Nori  
*RIKEN, Technische Universitat Berlin, National Cheng-Kung University, University of Michigan*
- PTu-09 : Coupled Plasmonic Cavities in the Quantum Hall System**  
M. Hashisaka, N. Kumada, K. Washio, H. Kamata, K. Muraki, T. Fujisawa  
*Tokyo Institute of Technology, NTT Basic Research Laboratories*
- PTu-10 : Non-monotonic Gate-voltage Dependence of the Edge Magnetoplasmon Group Velocity in the Quantum Hall Regime**  
H. Kamata, N. Kumada, M. Hashisaka, K. Muraki, T. Fujisawa  
*NTT Basic Research Laboratories, Tokyo Institute of Technology*
- PTu-11 : Fractional Statistics in the Hierarchical Fractional Quantum Hall States and Shot Noise at Finite Temperature**  
E. Iyoda, T. Fujii, T. Kato  
*University of Tokyo*
- PTu-12 : Controlled Dephasing of the Orbital Kondo Effect by a Side-coupled Quantum Point Contact**  
Yuma Okazaki, Satoshi Sasaki, Koji Muraki  
*NTT Basic Research Laboratories, Tohoku University*

- PTu-13 : Single-electron Stochastic Resonance Using Si Nano-wire Transistors**  
K. Nishiguchi, A. Fujiwara  
*NTT Basic Research Laboratories*
- PTu-14 : Electroluminescence Study of Phosphorous Ionization in Silicon-on-insulator Metal-oxide-semiconductor Field-effect Transistors**  
J. Noborisaka, K. Nishiguchi, Y. Ono, H. Kageshima, A. Fujiwara  
*NTT Basic Research Laboratories*
- PTu-15 : Capture and Emission Kinetics of Traps in MOSFETs**  
G. P. Lansbergen, Y. Ono, A. Fujiwara  
*NTT Basic Research Laboratories*
- PTu-16 : Studies of Nonlinear Dynamics in Mechanically Coupled SiN Nanomechanical Resonator with Photothermal Actuation**  
Sungwan Cho, Dong-Hyun Jang, Sung Un Cho, Yun Daniel Park  
*Seoul National University, Aalto University*
- PTu-17 : Direct Observation of Electron Dephasing due to Inelastic Scattering Weakly Disordered From Defects in AuPd Suspended Wires**  
Yuan-Liang Zhong, Andrei Sergeev, Chii-Dong Chen, Juhn-Jong Lin  
*Chung Yuan Christian University, University at Buffalo, Academia Sinica, National Chiao Tung University*
- PTu-18 : Remote Radio-frequency Actuation of a kHz Electromechanical Resonator**  
D. Hatanaka, I. Mahboob, K. Nishiguchi, A. Fujiwara, H. Yamaguchi  
*NTT Basic research Laboratories*
- PTu-19 :**
- PTu-20 : Resist Coating on Vertical Side Faces Using Conventional Spin Coating for Creating Three-Dimensional Nanostructures in Semiconductors**  
Kenji Yamazaki, Hiroshi Yamaguchi  
*NTT Basic Research Laboratories*
- PTu-21 : A Study of Biasing Crystallized on Structural and Electrical Properties of ZITO Film**  
Kuan-Jen Chen, Fei-Yi Hung, Shoou-Jinn Chang, Sheng-Po Chang, Zhan-Shuo Hu, Kuang-Wei Liu  
*National Cheng Kung University*
- PTu-22 : A Study of Indium Interlayer In-diffused on Crystallization and Optoelectronic Properties of ZITO Film**  
Kuan-Jen Chen, Fei-Yi Hung, Shoou-Jinn Chang, Sheng-Po Chang, Zhan-Shuo Hu, Kuang-Wei Liu  
*National Cheng Kung University*
- PTu-23 : A Zinc Oxide Nanoparticle Photodetector**  
Sheng-Po Chang, Chih-Han Chen, Chien-Yuan Lu, Shoou-Jinn Chang  
*National Cheng Kung University*
- PTu-24 : Catalyst-Free Fabrication of Align Ag Nanorods Using Mixed-Gases Sputtering**  
Zhan-Shuo Hu, Fei-Yi Hung, Shoou-Jinn Chang, Kuan-Jen Chen, Bo-Cheng Lin, Jay Chang, Sheng-Po Chang  
*National Cheng Kung University*

- PTu-25 : Synthesis and Biomedical Application of Novel Dye Doped Silica Based on Mesoporous Nanostructures**  
Haeyun Jang, Yuanzhe Piao  
*Seoul National University*
- PTu-26 : Preparation of Monodispersed Uniform Carbon Nanocapsules by Using the Silica Nanoparticle as Template**  
B. Quan, Y. Piao  
*Seoul National University*
- PTu-27 : GaN Metal-Semiconductor-Metal Photodetectors Prepared on Nanorod Template**  
Tse-Pu Chen, Shouu-Jinn Chang  
*National Cheng Kung University*
- PTu-28 : Influence of InN Nano Rods Growth on Si (111) Inserting CrN by Molecular Beam Epitaxy**  
Kuang-Wei Liu, Shouu-Jinn Chang, Sheng-Po Chang, Zhan-Shuo Hu, Kuan-Jen Chen  
*National Cheng Kung University*
- PTu-29 : Quantum Energy Teleportation: New Quantum Protocol of Energy Transportation**  
Masahiro Hotta  
*Tohoku University*
- PTu-30 : Lasing without Inversion in Circuit Quantum Electrodynamics**  
M. Marthaler, Y. Utsumi, D. S. Golubev, A. Shnirman, G. Schön  
*Mie University , INT, TKM, TFP*
- PTu-31 : Single InAs/InGaAlAs Quantum Dot Luminescence From Metal Buried Nano-cone Structures at Around 1.55  $\mu\text{m}$**   
C. Hermannstaedter, J.-H. Huh, N. A. Jahan, H. Sasakura, K. Akahane, M. Sasaki, I. Suemune  
*Hokkaido University, CREST-JST, NICT*
- PTu-32 : Ultrafast Semiconductor g(4) Measurement by HBT Interferometry of Quantum-well Based Upconversion**  
A. Hayat, A. Nevet, M. Orenstein  
*Technion*
- PTu-33 : Photoluminescence from Electron-Hole Droplet in Ultra-Thin Silicon-on Insulator at Low Temperatures**  
Yoko Sakurai, Kenji Shiraishi, Kenji Ohmori, Keisaku Yamada, Shintaro Nomura  
*University of Tsukuba*
- PTu-34 : Gate Voltage Dependence of Lifetime of Photoluminescence From an Asymmetric GaAs-AlGaAs Double Quantum Wells**  
K. Miyagi, M. Yamaguchi, H. Tamura, T. Akazaki, S. Nomura  
*University of Tsukuba, NTT Basic Research Laboratories*

## Poster Session II (Jan. 12, Wednesday)

17:40~19:20

**PWe-01 : Quantum Process Tomography and Weak Measurement**

Yutaka Shikano, Shu Tanaka

*Tokyo Institute of Technology, MIT, Kinki University*

**PWe-02 : Tunneling Phase and Boundary Condition in One-dimensional Schrödinger System**

Masao Hirokawa, Yutaka Shikano

*Okayama University, Tokyo Institute of Technology, MIT*

**PWe-03 : Electrical Transport through a C60 Molecular Bridge between Superconducting Aluminum Electrodes**

Youti Ootuka, Keita Urano, Kenji Kosaka, Masamichi Saito

*University of Tsukuba*

**PWe-04 : Projection Condition of Superconducting Flux Qubit State by Josephson Bifurcation Readout**

Kosuke Kakuyanagi, Hayato Nakano, Shiro Saito, Kouichi Semba

*NTT Basic Research Laboratories*

**PWe-05 : Statistics of Voltage Fluctuations in Resistively Shunted Josephson Junctions**

D. S. Golubev, M. Marthaler, Y. Utsumi, Gerd Schön

*Karlsruhe Institute of Technology, Mie University*

**PWe-06 : Novel Josephson  $\pi$ -state in a Ferromagnetic Insulator**

S. Kawabata, S. Kashiwaya, Y. Tanaka, A. A. Golubov, Y. Asano

*AIST, Nagoya University, University Twente, Hokkaido University*

**PWe-07 : Single-vortex Flow and Excess Resistance in Mesoscopic Superconductors**

A. Harada, K. Enomoto, Y. Takahide, M. Kimata, T. Yakabe, K. Kodama, N. Kurita,

S. Tsuchiya, T. Terashima, S. Uji

*NIMS, University of Tsukuba*

**PWe-08 : Topological Edge States in Non-centrosymmetric Superconductors**

Keiji Yada, Masatoshi Sato, Yukio Tanaka, Takehito Yokoyama

*Nagoya University, University of Tokyo, Tokyo Institute of Technology*

**PWe-09 : Density of State in a Topological Superconductor**

Akihiro Ii, Seiichiro Onari, Keiji Yada, Yukio Tanaka

*Nagoya University*

**PWe-10 : Theoretical Study on Magnetoelectric Effects of Embedded Graphene Nanoribbons on SiC(0001) Surface**

H. Kageshima, H. Hibino, M. Nagase, Y. Sekine, H. Yamaguchi

*NTT Basic Research Laboratories, University of Tokushima*

**PWe-11 : Two-Stage Growth of Aluminium Oxide on Graphite by Atomic Layer Deposition**

Y. Harada, Y. Sekine, T. Akazaki

*NTT Basic Research Laboratories*

**PWe-12 : Surface-Enhanced Raman Spectroscopy of Graphene Grown on SiC**

Y. Sekine, H. Hibino, K. Oguri, T. Akazaki, H. Kageshima, M. Nagase,

H. Yamaguchi

*NTT Basic Research Laboratories, University of Tokushima*

- PWe-13 : Density Stability Diagram of the Bilayer  $\nu_T = 1$  Quantum Hall State with and without the Spin Degree of Freedom**  
Keiko Takase, Koji Muraki  
*NTT Basic Research Laboratories*
- PWe-14 : Imaging Method for Microscopic Multi-nuclear Spin Systems ( $I > 1/2$ ) Using Longitudinal-magnetization-detection Nuclear Magnetic Resonance**  
T. Kawamura, G. Yusa  
*Tohoku University*
- PWe-15 : Spatial Distribution of Dynamic Nuclear Spin Polarization Induced by Breakdown of Odd-integer Quantum Hall Effect**  
M. Kawamura, K. Kono, Y. Hashimoto, S. Katsumoto, T. Machida  
*RIKEN, PRESTO-JST, University of Tokyo*
- PWe-16 : Resistive Detection of Optically Pumped Nuclear Spins by Using Spin Phase Transition Peak at  $\nu = 2/3$  Quantum Hall Regime**  
K. Akiba, S. Kanasugi, K. Nagase, Y. Hirayama  
*ERATO-JST, Tohoku University*
- PWe-17 : Investigation of the Spatial Profile of the Quantum-Hall Edge State by the Photovoltage Mapping Using Near-field Optical Microscopy**  
H. Ito, K. Furuya, Y. Shibata, Y. Ootuka, S. Kashiwaya, M. Yamaguchi, H. Tamura, T. Akazaki, S. Nomura  
*University of Tsukuba, AIST, NTT Basic Research Laboratories*
- PWe-18 : Motional Narrowing of Photoluminescence Linewidth of 2DEG-hole Emission**  
M. Yamaguchi, S. Nomura, H. Tamura, T. Akazaki  
*NTT Basic Research Laboratories, University of Tsukuba*
- PWe-19 : Channel Geometry Dependence of InGaAs/InAlAs in-plane Gate Devices' Electrical Characteristics**  
Y. Komatsuzaki, T. Kyougoku, K. Saba, K. Onomitsu, Y. Horikoshi  
*Waseda University, NTT Basic Research Laboratories*
- PWe-20 : Dual Gating of InAs/GaSb Heterostructures: Toward a Topological Insulating Phase and Quantum Spin Hall Effect**  
K. Suzuki, Y. Harada, K. Onomitsu, K. Muraki  
*NTT Basic Research Laboratories*
- PWe-21 : Fano-Kondo-Antiresonance in Side-Coupled Quantum Dot in Magnetic Field**  
Kimihiko Okubo, Mikio Eto  
*Keio University*
- PWe-22 : An Exact Approach for the Kondo State of a Quantum Dot Embedded in an Aharonov-Bohm Ring**  
R. Sakano, R. Yoshii, M. Eto, N. Kawakami, M. Yamamoto, S. Tarucha  
*University of Tokyo, Keio University, Kyoto University*
- PWe-23 : Many-Body Aharonov-Bohm Effect in Type-II Semiconductor Quantum Dot**  
Rin Okuyama, Mikio Eto, Hiroyuki Hyuga  
*Keio University*
- PWe-24 : Spin Current Generation using Semiconductor Quantum Dot with Spin-Orbit Interaction**  
T. Yokoyama, M. Eto  
*Keio University*
- PWe-25 : Backaction Dephasing Induced by Coupling with an Environment Containing a Quantum Dot Detector**  
T. Kubo, Y. Tokura  
*NTT Basic Research Laboratories*

- PWe-26 : Fluctuation Relation in a Semiconductor Double Quantum Dot**  
Y. Utsumi, D. S. Golubev, M. Marthaler, K. Saito, T. Fujisawa, Gerd Schön  
*Mie University, Forschungszentrum Karlsruhe, Universität Karlsruhe, University of Tokyo, NTT Basic Research Laboratories, Tokyo Institute of Technology*
- PWe-27 : Electron Spin Resonance Tunneling in Vertical Double Quantum Dots with Different G-factors**  
S. M. Huang, Y. Tokura, H. Akimoto, K. Kono, J. J. Lin, S. Tarucha, K. Ono  
*RIKEN, National Chiao Tung University, NTT Basic Research Laboratories ICORP-JST, University of Tokyo, CREST-JST*
- PWe-28 : Cotunneling Effects in GaAs Vertical Double Quantum Dots**  
A. O. Badrutdinov, S. M. Huang, K. Kono, K. Ono, D. A. Tayurskii  
*RIKEN, Kazan Federal University*
- PWe-29 : Gate Controlled Persistent Spin Helix State in InGaAs Narrow Wires**  
Y. Kunihashi, M. Kohda, J. Nitta  
*Tohoku University, PRESTO*
- PWe-30 : Transmission-phase Anomaly and a Possible Zero-field Spin Splitting in a Quantum Point Contact**  
T. Kobayashi, S. Tsuruta, S. Sasaki, H. Tamura, T. Akazaki  
*NTT Basic Research Laboratories, Tokyo University*
- PWe-31 : Linewidth of Electrically Detected Magnetic Resonance of Phosphorus Donors in Isotopically Controlled Silicon**  
H. Morishita, W. Akhtar, E. Abe, L. S. Vlasenko, H. Tanaka, K. Semba, K. Sawano, Y. Shiraki, M. S. Brandt, K. M. Itoh  
*Keio University, Oxford University, A. F. Ioffe Physico-Technical Institute NTT Basic Research Laboratories, Tokyo City University, Technical University of Munich*
- PWe-32 : A New Displacement Detection System Using an On-chip HEMT Amplifier**  
Yasuhiko Oda, Koji Onomitsu, Reo Kometani, Shin-ichi Warisawa, Sunao Ishihara, Hiroshi Yamaguchi  
*NTT Basic Research Laboratories, University of Tokyo*
- PWe-33 : Computational Block Copolymer Patterning and its Application**  
S. Kim  
*Hanyang University*
- PWe-34 : Correlation Between Fermi Level and Ga Vacancy Defect at the Epitaxial GaAs(111)A Surface**  
K. Kanisawa  
*NTT Basic Research Laboratories*
- PWe-35 : Chemical Vapor Deposition of BN-containing Graphite**  
Satoru Suzuki, Hiroki Hibino  
*NTT Basic Research Laboratories*